

CLIMATOLOGICAL TABLE—Summary of the Records of Temperature, Rainfall, and Sunshine for December 1965—continued

Station	Height of Station Above M.S.L.	Air Temperatures in Degrees (Fahrenheit)								Rainfall in Inches				Bright Sunshine Hrs.	
		Means of		Mean of A and B	Difference From Normal	Absolute Maximum and Minimum				Total Fall	No. of Rain Days	Difference From Normal	Maximum Fall		
		A	B			Maximum	Date	Minimum	Date				Amount		Date
		Max.	Min.	°F.	°F.	°F.	°F.	°F.	°F.	In.	In.				
Ophir	1,000	71.0	43.3	57.2	-4.2	86.6	23	30.8	28	0.51	5	-1.2	0.17	18	..
Moa Creek	1,400	69.6	41.4	55.5	-0.4	82.5	23	28.2	30	0.62	6	-1.1	0.21	18	..
Earnsclough	500	70.7	43.2	57.0	-2.0	88.1	24	31.5	30	0.83	5	-0.5	0.37	18	..
Alexandra	461	71.0	48.2	59.6	-1.1	88.2	24	36.4	30	0.57	5	-0.7	0.28	18	242
Roxburgh Hydro	350	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Moa Flat, West Otago	1,345	61.8	43.3	52.6	-1.0	77.4	23	32.0	30	3.16	13	+0.1	0.62	29	..
Lake Mahinerangi	1,300	63.6	43.4	53.5	..	78.0	15, 20, 24, 25	32.0	28, 30, 31	2.82	14	..	0.66	19	..
Tapanui	740	64.6	45.5	55.0	-1.2	82.5	14	33.0	30	4.34	15	+1.2	1.15	29	..
Rankleburn Forest	835	63.5	43.6	53.6	-1.8	80.2	14	32.2	30	4.41	14	..	0.77	29	..
Otautau	180	62.6	44.2	54.4	-1.3	79.0	15	32.8	30	5.70	11	+2.1	1.25	26	179
Gore	230	63.9	44.4	54.2	-3.0	81.1	16	32.0	30	5.28	12	+2.2	1.12	28	..
East Gore	245	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Winton	150	62.8	44.1	53.4	..	77.9	15	33.0	30	4.23	11	..	1.08	28	168
Pebble Hills	138	62.8	44.3	53.6	-2.8	80.0	15	32.6	30	5.85	14	+2.3	1.08	5	..
Invercargill Airport	1	60.7	45.6	53.2	-1.7	77.7	15	32.6	30	5.01	16	+1.4	1.04	5	157
Milton	60	64.9	44.9	54.9	..	82.5	14	35.7	20	4.09	14	+1.3	0.82	18	..
Balclutha	20	64.4	46.2	55.3	..	81.0	23	35.5	29	3.90	12	..	0.96	28	176
Rarotonga	15	81.7	71.8	76.8	..	84.9	29, 31	65.1	5	2.43	15	..	0.51	11	185
Raoul Island	126	72.3	63.6	67.9	-1.1	76.0	30	57.0	9	4.38	14	+0.6	1.11	18	199
Chatham Islands	157	60.3	50.8	55.6	-0.2	67.5	17	45.7	2	2.41	14	+0.1	1.05	18	174
Campbell Island	49	49.9	40.5	45.2	..	56.4	15	34.7	19	5.76	28	..	0.96	27	60
Scott Base, Antarctica	45	..	..	..	..	..	..	..	..	..	..	..	..	..	..

LATE RETURNS

Waitangi Forest, Nov 1965	180	68.3	51.2	59.8	..	73.0	27	39.2	4	2.75	10	..	0.69	7	..
Paeroa, Nov 1965	27	71.2	46.4	58.8	-1.5	77.2	11	37.0	22	3.22	13	-0.6	0.54	7	..
Grey mouth, Nov 1965	13	60.3	49.4	54.8	-1.0	66.5	26	41.0	20	12.71	23	+4.3	1.54	4	129
Onawe, Nov 1965	150	65.9	47.3	56.6	-0.7	81.0	25	37.0	20	4.10	14	+1.6	1.26	18	200
East Gore, Oct 1965	245	56.9	37.9	47.4	-3.8	71.0	15	30.0	13	4.35	14	+1.7	1.42	31	..
East Gore, Nov 1965	245	60.7	43.5	52.1	-1.9	78.0	26	35.0	20, 21	2.52	17	-0.7	0.63	27	..
Berwick Forest, Nov 1965	60	61.7	43.0	52.4	-1.4	76.5	26	33.8	20	4.15	18	+1.7	1.20	27	..
Moa Creek, Nov 1965	1,400	60.7	39.5	50.1	-1.9	71.8	26	23.1	21	1.38	9	+0.2	0.40	28	..
Taieri, Nov 1965	80	62.0	..	..	..	81.6	26	..	..	3.00	16	+0.7	0.60	28	..
Errata Flockhouse, Bulls, Nov 1965	30	..	49.9	56.6	..	..	..	..	..	..	..	..	..	..	..

The "normal" refers to the present site of the instruments. The standard periods for normals are: for temperature 1931-60, for rainfall 1921-50, and for sunshine 1935-60. No normals are available for stations with only short records.

NOTES ON THE WEATHER FOR DECEMBER 1965

General: December will be remembered for unseasonably cold and windy weather in the last six days of the month, especially on the 29th, with most unpleasant conditions for holiday-makers. Moisture was mainly adequate for pasture growth, and it was a good month for stock. However, the weather was too unsettled for haymaking, harvesting, and shearing. Fruit crops were reported to be late.

Gales buffeted many districts on the 29th and were exceptionally strong in Wellington.

Rainfall: Rainfall was somewhat above average over most of the North Island and in western and far southern districts of the South Island. Waikato, some central districts of the North Island, and the greater part of Hawke's Bay received more than 50 per cent above average, as did also eastern Southland and Fiordland. In coastal districts of southern Hawke's Bay rainfall was double the average value. In this area more than half the month's rain fell on the 20th, amounting to 2-6 in.

In Canterbury and North Otago rainfall was mainly less than half the average value. In some inland areas, especially around Lakes Tekapo and Pukaki and the upper Waitaki Valley, it was less than a quarter.

Temperatures: Temperatures were mainly close to average. However, Southland and south Otago were 1-3 degrees cooler than normal, while the Canterbury Plains were 1-2 degrees warmer.

On the 29th there was a general fall of snow over Southland and it lay to a depth of up to 6 in. in inland districts, especially western Southland. Parts of Otago were also affected, and some heavy snow falls were reported well down on the ranges as far north as Ruapehu.

Snow to low levels in the summer months in Otago and Southland is comparatively rare, but it has been previously reported.

Sunshine: Sunshine was above average by 20 to 70 hours in eastern districts from Dunedin to East Cape (not including Central Otago) and also in Bay of Plenty (except Rotorua), Waikato, and Auckland. The largest departures were in inland Canterbury, where Hanmer received its highest December sunshine for over 30 years.

The main area with sunshine below average was the West Coast, mainly by 15-20 hours. Other smaller areas with 15-45 hours less than average were the Bay of Islands, parts of Manawatu, the Waimea Plains of Nelson, and the Gore-Invercargill area.

Weather Sequence: At the beginning of the month an anticyclone was advancing on to the country from the west. At first a weak trough brought some scattered showers, especially about Cook Strait and northern Westland. However, from the 2nd to the 4th the anticyclone covered New Zealand, with fair weather.

During the next three days a trough of low pressure advanced slowly northward accompanied by considerable rain on the western and southern coasts of the South Island and some rain in many other districts; but over most of the Auckland Province the falls

were very light. A small anticyclone brought a brief spell of fair weather on the 8th. The weather remained predominantly fair from the 9th to the 11th, but a weak trough of low pressure affected some districts from Marlborough northward. Pressures remained high for another two days, with fair weather still persisting over the greater part of the country. However, Hawke's Bay and southern and eastern districts of the Auckland Province received some rain.

On the 14th an anticyclone was centred to the east of the North Island and pressures were falling over the Tasman Sea, with depressions developing to the west of the North Island and to the south-west of the South Island. A moist north-westerly airstream covered the South Island, with heavy rain on this and the following day in the Alps and in Fiordland and Westland. During the 16th and 17th the northernmost depression crossed the North Island, while the trough of low pressure associated with the southern depression also moved across the country. There was some further heavy rain at first on the West Coast and in the Alps, and some considerable falls also in the Taranaki and Auckland Provinces. The only areas which received no rain or very little were Otago and Canterbury east of the Alps and the Kaikoura coast.

Another trough of low pressure associated with a shallow depression west of the North Island crossed the country from the 18th to the 20th, with some rain in most districts. Considerable falls were reported in Wellington, Manawatu, and southern and central Hawke's Bay. On the 21st the depression was still to the east, and the weather remained showery in some areas. However, an anticyclone covered the country from the 22nd to the 25th, with fair weather.

On the 26th a very deep depression passed over Campbell Island, and the associated trough of low pressure crossed New Zealand, causing a change to south-westerly to westerly winds with colder temperatures. From the 26th to the 28th the West Coast and the Alps received heavy rain. Many other districts also received some rain, but eastern districts from Dunedin to East Cape were not affected. On the 29th a small secondary depression formed off Fiordland and crossed the South Island. The associated vigorous cold front brought exceptionally cold temperatures, with snow to low levels in parts of Southland and well down on the ranges elsewhere. In addition unusually strong north-westerly gales were reported in Cook Strait. Rain became fairly general.

By the 30th an anticyclone was centred east of Auckland and a deep and extensive depression was centred far to the south-west of the South Island. This day was one of fair weather; but as the north-westerlies freshened on the last day of the month ahead of the associated trough of low pressure considerable rain was reported once again from the West Coast and the Alps; and some other districts, mainly in the South Island, were also affected.

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